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SDS Removable Hard Drive Management System (Hard Drive Swap)

I. Purpose:

The purpose of this procedure is to document the sequence in which the SDS removable hard drives are managed “swapped” (installed, removed, stored, and shipped). There are 12 removable hard drives in circulation for each site at any given time. The 12 removable hard drives have been grouped in four (4) color coded sets as follows:

Red A, Red B, Red C
 Green A, Green B, Green C
 Blue A, Blue B, Blue C
 Yellow A, Yellow B, Yellow C

A “Removable HD Locations By Week” matrix (Attachment 1) has been prepared with the appropriate sequencing of the hard drives by week and color code. It is imperative that the sequencing does not vary.

II. Cautions and Hazards:

None.

III. Requirements:

None.

IV. Procedure:

A. Steps:

1. A determination is made by TWPO that the hard drives are to be swapped. This usually happens the first of each month.
2. Using the “Removable HD Locations By Week” matrix, determine the next swap number.
3. Enter the date on the matrix in the “Date Swapped” row.
4. Prepare the “SDS Removable Hard (HD) Swap Verification Sheet” (Attachment 2). Using the information from the current matrix column, complete the Verification Sheet with hard drive identifications and corresponding locations.
5. Prepare a fax cover sheet (Attachment 3).
6. Fax the Verification Sheet to the site.
7. The site will fax a signed and dated copy of the “SDS Removable Hard (HD) Swap Verification Sheet” back to TWPO. If you do not receive the

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fax within 24 hours, notify Monty Apple and contact the site to determine status of swap.

8. Notify Monty Apple that the hard drive swap has been completed and fax him the verification sheet for his records. TWPO will fill out a replacement form (RPL) and log it in OMS (Reference 1)
9. File all paperwork.

V. References:

1. Records Entry Process, PRO(TWPPO)-064.000

VI. Attachments:

1. Removable HD Locations By Week Matrix (3 pages)
2. SDS Removable Hard Drive Verification Sheet
3. Fax Cover Sheet (example)

Attachment 1: Removable HD Locations By Week Matrix

REMOVABLE HARD DRIVE LOCATIONS BY WEEK

The Removable Hard Drives (HD) are the data transfer system for all the data from the TWP ARCS sites to the DMF at PNNL in Richland, Washington. Management of the HDs is based on the following assumptions:

1. The Removable HDs are reused after data is deleted.
2. Each of the ARCS sites gathers all their data on two Removable HDs in the SDS. One is kept on site as an Archive backup and one is sent to PNNL where the data is read and then deleted from the HD.
3. PNNL will do all data removal, including removing the data from the Archive HDs.
4. Once the system is going there will be 2 HDs sent to PNNL approximately every 4 weeks.
5. The mailing sequence for each site is as follows:
 - 2 HDs will stay in the SDS collecting data for approximately 4 weeks to be removed upon direction from TWP.
 - After 4 weeks the 2 HDs are removed from the SDS. One is archived at the ARCS site, and the other is shipped to PNNL along with the previous Archive HD of the same color.
 - 2 weeks are allowed for shipping.
 - 1 week is allowed for PNNL to read the data from the current HD and delete the data from the old Archive HD.
 - 2 weeks are allowed for shipping from SGP to the sites.

The Observers carry out this process via 1) the Daily Rounds instructions, 2) the Weekly Rounds data media mailing instructions, and 3) The SDS “HD Removal Procedure”, all in the On-Site Observer’s Manual.

Initial setup at each site:

- In the SDS: rA, rB
- In “BLANK” container: gA, gB, bA, bB, yA, yB
- In “ARCHIVE” container: rC, gC, bC, yC
- In to be “MAILED” container: empty

So for 4 week removal frequency:

- Need 3 shipping cases (2 HDs per shipper)
- Need ARCHIVE container for 4 HDs
- Need BLANK container for 4 HDs (2 plus 2 early returns)
- Need To Be MAILED container for 2 HDs.

REMOVABLE HD LOCATIONS BY WEEK

SHEET 1

Key: rA=red HD"A", yC=yellow HD"C", etc. There are 4 colored (red, green, blue, yellow) sets of 3 HDs each (A,B & C) = 12 in circulation at each site. The HDs will have colored stickers that are permanently attached to the HD and an "in/out" label that is cleaned off each time it is returned to the DMF. Note that the color sequence is RED-GREEN-BLUE-YELLOW-RED-GREEN... etc. In the table below (row 2), the two hard drive bays are labeled SLOT#1 and SLOT#2, and each bay needs to have the correct HD inserted. For example, for the pair of HDs in the SDS during week 01, the top HD (eg. rA) goes in SLOT#1, and the bottom HD (eg. rB) goes in SLOT#2. Following this pattern will ensure that all the HDs will rotate through all the drive bays.

Date Swapped	M			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb					
	N			Apr	03 May 10	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb					
Swap	1	5	9	13	17	21	25	29	33	37	41	45	49	53	57	61	65	69	
SLOT#1 ---- SLOT#2 ---- In the SDS	rA rB	gA gB	bA bB	yA yB	rC rA	gC gA	bC bA	yC yA	rB rC	gB gC	bB bC	yB yC	rA rB	gA gB	bA bB	yA yB	rC rA	gC gA	
In Transit to DMF	yB yA	rA rC	gA gC	bA bC	yA yC	rC rB	gC gB	bC bB	yC yB	rB rA	gB gA	bB bA	yB yA	rA rC	gA gC	bA bC	yA yC	rC rB	
At DMF	bB bA	yB yA	rA rC	gA gC	bA bC	yA yC	rC rB	gC gB	bC bB	yC yB	rB rA	gB gA	bB bA	yB yA	rA rC	gA gC	bA bC	yA yC	
In Transit from DMF*	bB bA	yB yA	rA rC	gA gC	bA bC	yA yC	rC rB	gC gB	bC bB	yC yB	rB rA	gB gA	bB bA	yB yA	rA rC	gA gC	bA bC	yA yC	
HD with data in “ARCHIVED Media” container	rC gC bC yC	rB gC bC yC	rB gB bC yC	rB gB bB yC	rB gB bB yB	rA gB bB yB	rA gA bB yB	rA gA bA yB	rA gA bA yA	rC gA bA yA	rC gC bA yA	rC gC bC yA	rC gC bC yC	rB gC bC yC	rB gB bC yC	rB gB bB yC	rB gB bB yB	rA gB bB yB	
HD without data in “BLANK Media” container	gA gB	bA bB	yA yB	rA rC	gA gC	bA bC	yA yC	rC rB	gC gB	bC bB	yB yC	rA rB	gA gB	bA bB	yA yB	rA rC	gA gC	bA bC	

*DMF processes and ships hard drives the same week.

ARCS-1 (Manus)

Serial Numbers for Removable Hard Drives

RedA 24513870011

RedB 24513870008

RedC 24514240116

BlueA 24514240112

BlueB 24514240113

BlueC 24514240102

GreenA 24514240095

GreenB 24514240103

GreenC 24514240105

YellowA 24514240106

YellowB 24513090229

YellowC 24514240104

ARCS-2 (Nauru)

Serial Numbers for Removable Hard Drives

RedA 24513870009

RedB 24514240118

RedC 24514240109

BlueA 24514240096

BlueB 24514240107

BlueC 24514240097

GreenA 24514240099

GreenB 24514240100

GreenC 24514240101

YellowA 24514240108

YellowB 24514240114

YellowC 24514240115

Attachment 2: SDS Removable Hard (HD) Swap Verification Sheet

Date: (_____)

Site Name: ARCS-1 or ARCS-2 (circle one)

When you complete the hard drive swap, the hard drives should be in the following Configuration:

SDS:

Slot 1 (HD Color _____ Letter _____) In Date & Time _____

Slot 2 (HD Color _____ Letter _____) In Date & Time _____

Hard drives in the “**Media To Be Mailed**” container:

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

Hard drives in “**Archived Media**” container:

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

Hard drives in “**Blank Media**” container:

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

(HD COLOR _____ LETTER _____)

When you complete the swap, please sign and date this sheet and fax to:

TWPO

(505) 667-9122

Print Name

Date

Attachment 3: Fax Cover Sheet (example)

ARM/TWPO
ATMOSPHERIC RADIATION MEASUREMENTS -
TROPICAL WESTERN PACIFIC OFFICE

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
OFFICER IN CHARGE	MONTY APPLE

COMPANY:	DATE:
ARCS SITE	MAY 31, 2001

TOTAL NO. OF PAGES INCLUDING COVER:
2

REFERENCE:
SDS Removable Hard Drive Swap

NOTES/COMMENTS:

We need to do a hard drive swap today. Please verify that the hard drives are in the locations as stated on the attached Verification Sheet. If you have any questions, please call me.

Please fax the signed Verification Sheet to Larry Jones at the TWPO as soon as you finish the disk swap. Fax number is **505-667-9122**.

Thank you,

Monty Apple
